

## ABSTRACT

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Lanthanide complexes, preparation thereof and uses thereof

The invention relates to compounds, to the complexes they form with a lanthanide, and to the use of the complexes for fluorescence marking or NMR imaging.

The complex consists of an Ln ion and a ligand  $R^2-C(X-R^1)(R^3)-NR^4R^5$ .  $R^1$  is a functional group, X is a single bond or a hydrocarbon-based chain consisting of at least one alkylene or alkenylene group optionally comprising at least one hetero atom or an arylene.  $R^2$  is an anionic group  $A^2$  or a  $C_1-C_4$  alkylene or alkenylene group bearing at least one such group  $A^2$  and optionally comprising at least one hetero atom.  $R^3$  is H or a  $C_1-C_5$  alkylene or alkenylene group optionally containing at least one hetero atom, and optionally bearing at least one anionic group  $A^3$ .  $R^4$  is a substituent with light-absorbing properties that forms chelate rings with Ln.  $R^5$  is a substituent that forms chelate rings with Ln.